



FUNDAMENTAL TRAINING COURSES

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FUNDAMENTALS OF PACKAGING TECHNOLOGY ONLINE

Pricing for SPE members & non-members

SPE COMPLETE CATALOG

Includes all 19 modules listed below:

\$1,895 SPE member \$2,295 non-member

SINGLE MODULES:

FPT00-01: Perspective on Packaging (1 hr)

FREE INTRODUCTORY MODULE

In this module you will learn about the history of packaging, the importance of packaging, the role of packaging and the different facets of the packaging industry.

FPT02-02: Introduction to Printing (45 min)

\$142 SPE member \$158 non-member

In this lesson we will discuss the prepress process and the basics of the different printing processes. We'll look at film, computer and the direct-to-press prepress processes. Halftone and process art development will be discussed.

FPT02-03: Printing Methods (45 min)

\$142 SPE member \$158 non-member

In this lesson you'll learn about the most common printing processes: Flexography, Lithography and Gravure. We will also discuss several package decorating methods: Screen Printing, Hot Stamping, Heat Transfer and Pad Printing.

FPT04-01: Distribution Environment (1 hr, 45 min)

\$236 SPE member \$263 non-member

In this lesson we will explore what it takes to protect a product through its distribution environment so that it arrives undamaged at its final destination and in the hands of the consumer. We'll examine how it's important to not only consider the package design, but also the design of the product itself.

FPT04-02: Protective Packaging (30 min)

\$95 SPE member \$105 non-member

In this lesson we'll cover the science involved in creating packaging that will survive the distribution environment. You'll learn the physics involved in a falling, or more importantly, involved in the "sudden stop" or "change in direction" of a package that can cause damage. We'll also discuss how to calculate the cushioning required preventing damage, as well as some of the most popular materials used.

FPT04-03: Pre-Shipment Testing (30 min)

\$95 SPE member \$105 non-member

In this lesson we'll discuss pre-shipment testing procedures and the different methods of distribution testing. We'll also study the rules and regulations of package testing.

FPT05-01: Introduction to Polymers (30 min)

\$95 SPE member \$105 non-member

In this lesson you will be introduced to the basics of polymers. We'll cover the basic terminology and definitions used to describe polymers, the raw materials used in the manufacturing of polymers and the makeup of some common polymers.

FPT05-02: Polymer Chemistry (30 min)

\$95 SPE member \$105 non-member

In this lesson you will learn about polymers, the process of polymerization and the different properties that affect how a polymer will react in processing. We'll review the effects that a polymer's molecular structure, polarity and size have on the permeation and barrier properties of the polymer.

FPT05-03: Packaging Polymers (30 min)

\$95 SPE member \$105 non-member

In this lesson we'll discuss the most common polymers used in packaging, their general properties and their common applications.

FPT05-04: Polymer Property Comparisons (30 min)

\$95 SPE member \$105 non-member

In this lesson we'll compare the properties of different polymers. You'll learn about their physical properties, such as elasticity, viscosity and viscos-elasticity. We'll look at Melt Index and melt flow rate and outline how polymers are selected for use, based on the expected temperature ranges involved. You'll see how chemical additives can modify or improve the properties to polymers.

FPT06-01: Extruded Films (30 min)

\$95 SPE member \$105 non-member

In this lesson you will learn about the most common method used to form plastic sheet and simple-profile plastic components. You'll see the operation of a plasticizing extruder, which is the beginning of any plastic molding process. We'll review the processes for manufacturing extrusion profiles, cast film and blown extrusion film.

FPT06-02: Flexible Packaging (Part I) (1 hr)

\$189 SPE member \$210 non-member

In this lesson you will learn the about the different types of materials used in flexible packaging, including their characteristics, applications and production. We'll talk about the roles aluminum foil, paper and plastic films play in modern product packaging and how the choice of the packaging material should be based on the product being packaged.

FPT06-03: Flexible Packaging (Part II) (1 hr)

\$189 SPE member \$210 non-member

In this lesson we'll discuss plastic laminates, including their structural and physical properties. We'll also talk about how to effectively specify laminates. We'll show you several examples of laminates and how they are used for packaging of both food and non-food products. You'll see the converting process and see how certain packaging materials are manufactured.

FPT06-04: Thermoforming (30 min)

\$95 SPE member \$105 non-member

In this lesson you will learn the fundamentals of the thermoforming process and its application within the packaging industry. We'll review the different types of molds used in this process and discuss the guidelines that need to be employed to design a component that will be produced using this process.

FPT06-05: Injection Molding (30 min)

\$95 SPE member \$105 non-member

In this lesson we'll examine the different types of molds used for injection molding and how they operate. You'll learn the definition and purpose of speers, runners and gates. You'll discover the challenges posed by molding objects with undercuts or threaded closures. We'll look at thermal expansion of the polymers and why sink marks are formed. And we'll discuss the special design requirements of an injection molded cup.

FPT06-06: Blow Molding (30 min)

\$95 SPE member \$105 non-member

Processes used to make bottles, including extrusion blow molding, injection blow molding and injection-stretch blow molding. We will review the advantages and disadvantages of each technique. Finally, we'll show you a bit about in-mold labeling.

FPT07-01: Bottle Design Criteria (30 min)

\$95 SPE member \$105 non-member

In this lesson you will learn the basic design criteria that go into producing a bottle that can be efficiently produced and cost-effectively filled on a production line to provide the consumer with a package that adds value.

FPT07-05: Closures (Part I) (30 min)

\$95 SPE member \$105 non-member

In this lesson you will learn the basic terminology used to describe a closure, the different types of closures available and how to select a bottle/closure combination that will protect the product through the life of the product.

FPT07-06: Closures (Part II) (45 min)

\$142 SPE member \$158 non-member

In this lesson you will learn the different common plastic closure designs and the purpose that liners serve in the selection of a closure. We'll take a look at the different styles of closures that are available other than plastic and discuss the emergence and importance of child-resistant and tamper-evident closures.